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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/752,607	12/27/2000	William Williams	CSCO-96941	1311

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EXAMINER

NGUYEN, CINDY

ART UNIT	PAPER NUMBER
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2171

DATE MAILED: 01/09/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/752,607

Applicant(s)

WILLIAMS, WILLIAM

Examiner

Cindy Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 10 February 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

This is in response to amendment filed 10/28/03.

1. *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. *Claims 1, 2, 7, 12, 14, 15, 20 and 21 rejected under 35 U.S.C. 103(a) as being unpatentable over Beier et al. (U.S 6065018) (Beier).*

Regarding claims 1, 12, 14 and 20, Beier discloses: a system and method and a computer-readable medium and an apparatus of archiving a database, comprising the steps of: storing a plurality of archive logs (col. 5, lines 21-25, Beier) comprising a plurality of transactions (col. 5, lines 61 to col. 6, lines 11, Beier) on an operational database (106, fig. 1 and corresponding text, Beier);

transmitting a plurality of asynchronous streams to a backup database (col. 8, lines 51-63, Beier), wherein the asynchronous streams correspond to a plurality of the archive logs (col. 10, lines 53-63, Beier);

Updating the backup database with the plurality of transactions (col. 5, lines 61 to col. 6, lines 11, Beier).

However, Beier is silent with respect to: wherein a first asynchronous stream of said plurality of asynchronous streams is transmitted at a first transmission rate and a second

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asynchronous stream of said plurality of asynchronous streams is transmitted at a second transmission rate and the response at page 12 of specification states that multiple asynchronous transmission is (e.g. at different rates). In Beier's background at col. 2, lines 36-39, Beier teaches that prior art systems use independent (asynchronous) transmission protocols. Beier is then directed to synchronous the recovery logs in such a case. Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include wherein a first asynchronous stream of said plurality of asynchronous streams is transmitted at a first transmission rate and a second asynchronous stream of said plurality of asynchronous streams is transmitted at a second transmission rate in the system of Beier as taught by Beier's background. The motivation being to enable the system solves the problem as set forth in the claims as independently transmitted the recovery logs of the hierarchial and relational database to the remote site are synchronized to expedite and insure consistent recovery in the event of disaster at the primary site.

In addition, Beier discloses: a memory for storing instructions on how data is to be transferred from the operational database to the backup database (130, fig. 1 and corresponding text, Beier).

Regarding claims 2, 15 and 21, all the limitations of these claims have been noted in the rejection of claims 1, 14 and 20, respectively. In addition, Beier discloses: wherein the plurality of asynchronous streams are transmitted simultaneously (col. 8, lines 51-63, Beier).

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Regarding claim 7, all the limitations of this claim have been noted in the rejection of claim 1. In addition, Beier discloses: further comprising the step of constructing an array of the plurality of archive logs which are to be transferred from the operational database to the backup database (col. 8, lines 51-63, Beier).

3. Claims 8, 9, 11, 17, 18, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohran (U.S. 6085298) in view of Scanlan et al. (U.S. 6640217) (Scanlan).

Regarding claims 8, 17 and 23, Ohran discloses: A method and an apparatus of performing automatic recoveries on an archived database, comprising the steps of:

comparing files residing on An operational database to files residing on a backup database (col. 29, lines 26-40, Ohran);

determining whether there are any missing files by checking for files which exist on the operational database and which do not exist on the backup database (col. 30, lines 15-38, Ohran);

determining whether there are any corrupted files by checking for files which have a different size on the operational database as compared to corresponding file residing on the backup device (col. 30, lines 30-35, Ohran);

recopying files from the operational database to the backup database which have become corrupted (col. 30, lines 30-35, Ohran);

recopying files from the operational database over to the backup database which are missing (col. 30, lines 30-35, Ohran).

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However, Ohran didn't disclose: wherein the automatic recovery process is run by a program automatically in the background without requiring initiation. On the other hand, Scanlan discloses: wherein the automatic recovery process is run by a program automatically in the background without requiring initiation (col. 5, line 5, to col. 6, lines 29, Scanlan). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include automatic recovery process is run by a program automatically in the background without requiring initiation in the system of Ohran as taught by Scanlan. The motivation being to enable the system provides the ability to automate, requiring little or no further intervention, the regular and scheduled extraction of historical records of data backup activity from a plurality of data backup software devices (col. 3, lines 9-12, Scanlan).

Regarding claims 9, 18 and 24, all the limitations of these claims have been noted in the rejection of claims 8, 17 and 23, respectively. In addition, Ohran/Scanlan discloses: further comprising the step of transferring a plurality of files simultaneously from the host device to the backup device (col. 20, lines 20-37, Ohran).

Regarding claim 11, all the limitations of this claim have been noted in the rejection of claim 8. in addition, Ohran/Scanlan discloses: wherein the comparing step comprises the step of performing a rolling checksum (col. 5, lines 6-22, Scanlan).

4. Claim 3, 4, 6, 13, 16, 19 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beier et al. (U.S 6065018) (Beier) in view of Ohran (U.S 6085298).

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Regarding claims 3, 13,16 and 22, all the limitations of these claims have been noted in the rejection of claims 1, 12, 14 and 21, respectively. However, Beier didn't disclose: further comprising the steps of: comparing a plurality of files corresponding to the backup database to a plurality of files of the operational database to determine whether there are any corrupt or missing files. On the other hand, Ohran discloses: further comprising the steps of comparing a plurality of files corresponding to the backup database to a plurality of files of the operational database to determine whether there are any corrupt or missing files (col. 30, lines 15-38, Ohran); automatically transferring files from the operational database to the backup database which have been corrupted or deleted (col. 30, lines 30-35, Ohran). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include the steps of: comparing a plurality of files corresponding to the backup database to a plurality of files of the operational database to determine whether there are any corrupt or missing files and transferring files from the operational database to the backup database which have been corrupted or deleted in the system of Beier as taught by Ohran. The motivation being to enable the system to retransfer the data missing when transfer to backup database and avoid losing information when backup and recovery data in the file system when corrupt data occur by system crash.

Regarding claim 4, all the limitations of this claim have been noted in the rejection of claim 1. However, Beier didn't disclose: further comprising the step of transmitting a predetermined number of streams in parallel, wherein the number is set by a user in a config file. On the other hand, Browne disclose: further comprising the step of transmitting a predetermined

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number of streams in parallel (col. 20, lines 20-37, Ohran), wherein the number is set by a user in a config file (col. 11, lines 8-16, Browne). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include step of transmitting the number of streams in parallel by a user in a config file in the system of Beier as taught by Ohran. The motivation being enable the user to transmit many files in the file system faster and avoid corrupt data by system crash.

Regarding claim 6, all the limitations of this claim have been noted in the rejection of claim 1. In addition, Beier/Ohran disclose: further comprising the step of running streaming rsynchs for copying data from the operational database to the backup database (col. 5, lines 44-62, Ohran). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include step of running streaming rsynchs for copying data from the operational database to the backup database in the system of Beier as taught by Ohran. The motivation being enable the user to transmit many files in the file system faster and avoid corrupt data by system crash.

Regarding claims 10 and 19, all the limitations of these claims have been noted in the rejection of claims 9 and 17, respectively. In addition, Beier/Ohran discloses: wherein the plurality of files are streamed according to an rsync command (col. 7, lines 1-19, Beier).

5. Claim 5 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Beier et al. (U.S. 6065018) (Beier) in view of Nielsen (5812398).

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Regarding claim 5, all the limitations of this claim have been noted in the rejection of claim 1. However, Beier didn't disclose: wherein the transmitting step runs in cron. On the other hand, Nielsen discloses: wherein the transmitting step runs in cron (col. 7, line 14 to col. 8, lines 11, Nielsen). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include the transmitting step runs in cron in the system of Beier as taught by Nielsen. The motivation being to enable the user to maintain the system which indicates that the backup routine should be run at specified intervals.

6. *Response to Arguments (filed 10/28/03)*

Applicant's arguments have been considered, but are moot in view of the new ground(s) of rejection.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


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7. Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cindy Nguyen whose telephone number is 703-305-4698. The examiner can normally be reached on M-F: 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.


Cindy Nguyen
January 7, 2004


WAYNE AMSBURY
PRIMARY PATENT EXAMINER